

**IN THE UNITED STATES DISTRICT COURT  
FOR THE SOUTHERN DISTRICT OF NEW YORK**

PHILIPS LIGHTING NORTH AMERICA  
CORPORATION and PHILIPS LIGHTING  
HOLDING B.V.

Plaintiffs,

vs.

REGGIANI LIGHTING USA, INC. and  
REGGIANI S.P.A. ILLUMINAZIONE

Defendants.

Civil Action No. 1:18-cv-11098

**JURY TRIAL DEMANDED**

**COMPLAINT FOR PATENT INFRINGEMENT**

Plaintiffs Philips Lighting North America Corporation and Philips Lighting Holding B.V. (collectively, “Philips Lighting”) for their complaint against Reggiani Lighting USA, Inc. and Reggiani S.p.A. Illuminazione (“Defendants”) allege as follows:

**NATURE OF THE ACTION**

1. This is a civil action for patent infringement arising under the patent laws of the United States, 35 U.S.C. § 1 *et seq.* including 35 U.S.C. § 271.

**THE PARTIES**

2. Plaintiff Philips Lighting North America Corporation is a corporation organized and existing under the laws of Delaware with its principal place of business at 200 Franklin Square Drive, Somerset, New Jersey 08873. Philips Lighting North America Corporation is registered to do business in the Commonwealth of Massachusetts and has a place of business at 3 Burlington Woods Drive, Burlington, Massachusetts 01803.

3. Plaintiff Philips Lighting Holding B.V. is a corporation organized and existing under the laws of the Netherlands with its principal place of business at High Tech Campus 7, 5656 AE Eindhoven, The Netherlands.

4. On information and belief, Defendant Reggiani Lighting USA, Inc. is a corporation organized and existing under the laws the State of New York and has a place of business at 372 Starke Road, Carlstadt, New Jersey 07072.

5. On information and belief, Defendant Reggiani S.p.A. Illuminazione is a corporation organized and existing under the laws of Italy and has a place of business at Viale Monza 16, 20845 Sovico MB, Italy.

#### **JURISDICTION AND VENUE**

6. This Court has subject-matter jurisdiction over this patent infringement action pursuant to 28 U.S.C. §§ 1331 and 1338.

7. On information and belief, this Court has personal jurisdiction over Defendants for at least the following reasons: (i) Defendants have committed acts of patent infringement in this District; (ii) Defendants regularly do business, solicit business, and/or derive substantial revenue from products provided within this District, including products that infringe Philips Lighting's patented technology; and (iii) Defendant Reggiani USA is incorporated in New York.

8. On information and belief, Defendants have committed acts of patent infringement by selling infringing products in New York through distributor Quality Lighting Systems located at 250 Commerce Boulevard, Liverpool, New York 13088. On information and belief, Defendant Reggiani USA has also committed acts of patent infringement by offering to sell, selling, and/or importing infringing products at one or more trade shows in New York City, New York.

9. Defendants provide a General Terms and Conditions of Sale and Delivery on Defendant Reggiani's USA website (see <http://www.reggianiusa.com/general-terms-and-conditions-of-sale-and-delivery/?lang=us>), which "serve as basis for all contracts on the sale of goods by and between Reggiani S.p.A. Illuminazione, Sovico, -ITALY (hereinafter referred to as "Vendor") and its customers (hereinafter referred to as "Customer")." In addition, Defendants provide warranty conditions for LED light source on Defendant Reggiani USA's website (see <http://www.reggianiusa.com/warranty-conditions-for-led-light-source/?lang=us>), which set out the "Warranty conditions offered by Reggiani S.p.A. Illuminazione for the supply of products that use a LED LUCE light source."

10. Venue properly lies in this District under the provision of 28 U.S.C. § 1400 because, on information and belief, Defendant Reggiani USA is a New York corporation, Defendant Reggiani S.p.A. Illuminazione is a foreign corporation for which venue is proper in any judicial district, and Defendants have committed acts of patent infringement in this District.

### **THE PATENTS-IN-SUIT**

11. Philips Lighting is a global market leader with recognized expertise in the development, manufacturing, and application of innovative LED lighting solutions.

12. To protect its intellectual property resulting from its significant investments, Philips Lighting applied for and obtained numerous patents directed to various LED inventions and technologies; for example, Philips Lighting's LED-related patents include U.S. Patent Nos. 7,348,604, 7,352,138, 7,766,518, and 8,070,328 (collectively, the "Patents-in-Suit").

13. U.S. Patent 7,348,604 ("the '604 Patent"), titled "Light-emitting Module," was duly and legally issued by the United States Patent and Trademark Office on March 25, 2008. Plaintiff Philips Lighting Holding B.V. is the assignee and owner of all right, title, and interest in

the '604 Patent, a copy of which may be found at <http://patft1.uspto.gov/netacgi/nph-Parser?patentnumber=7348604>.

14. U.S. Patent 7,352,138 (“the ’138 Patent”), titled “Methods and apparatus for providing power to lighting devices,” was duly and legally issued by the United States Patent and Trademark Office on April 1, 2008. Plaintiff Philips Lighting North America Corporation is the assignee and owner of all right, title, and interest in the ’138 Patent, a copy of which may be found at <http://patft1.uspto.gov/netacgi/nph-Parser?patentnumber=7352138>.

15. U.S. Patent 7,766,518 (“the ’518 Patent”), titled “LED-based light-generating modules for socket engagement, and methods of assembling, installing and removing same,” was duly and legally issued by the United States Patent and Trademark Office on August 3, 2010. Plaintiff Philips Lighting North America Corporation is the assignee and owner of all right, title, and interest in the ’518 Patent, a copy of which may be found at <http://patft1.uspto.gov/netacgi/nph-Parser?patentnumber=7766518>.

16. U.S. Patent 8,070,328 (“the ’328 Patent”), titled “LED Downlight” was duly and legally issued by the United States Patent and Trademark Office on December 26, 2011. Plaintiff Philips Lighting Holding B.V. is the assignee and owner of all right, title, and interest in the ’328 Patent, a copy of which may be found at <http://patft1.uspto.gov/netacgi/nph-Parser?patentnumber=8070328>.

### **COUNT ONE**

#### **INFRINGEMENT OF U.S. PATENT NO. 7,348,604**

17. Philips Lighting incorporates by reference the allegations in paragraphs 1-16 as if fully set forth herein.

18. On information and belief, Defendants have infringed and are infringing claims of the '604 Patent, including at least claim 1, in violation of 35 U.S.C. § 271(a) by manufacturing, using, offering to sell, selling, and/or importing infringing products.

19. Claim 1 of the '604 Patent recites:

A light-emitting module comprising:

(a) a thermally conductive substrate having one or more light-emitting elements thermally connected thereto, the substrate configured to operatively couple a source of power to the one or more light-emitting elements, thereby providing a means for activation of the one or more light-emitting elements;

(b) a heat dissipation element thermally coupled to the thermally conductive substrate; and

(c) a housing element including fastening means for detachably coupling the housing element to the heat dissipation element, said substrate being enclosed between the heat dissipation element and said housing element, said housing element including a transparent region enabling transmission of light emitted by the one or more light-emitting elements therethrough.

20. On information and belief, Defendants have directly infringed and are directly infringing claim 1 of the '604 Patent by making, using, offering to sell, selling, and/or importing at least Rollios 13W and Yori Track Large 30W products in this judicial district and elsewhere in the United States.

#### **Infringing Rollios 13W Products**

21. On information and belief, Rollios 13W products include a light-emitting module, as shown below.

22. On information and belief, Rollios 13W products include a thermally conductive substrate having one or more light-emitting elements thermally connected thereto, the substrate configured to operatively couple a source of power to the one or more light-emitting elements, thereby providing a means for activation of the one or more light-emitting elements; for

example, a thermally conductive substrate is formed by a PCB thermally connected to multiple LEDs in the LED module. The PCB is configured to operatively couple a source of power (received from the wires connected to the driver) to the LEDs in order to power the LEDs, as shown below.

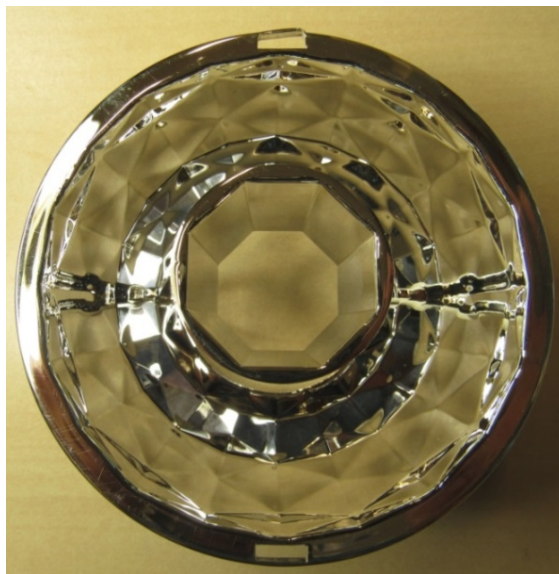
23. On information and belief, Rollios 13W products include a heat dissipation element thermally coupled to the thermally conductive substrate; for example, a heat dissipation element, formed by a metal backing and fins, is thermally coupled to the PCB, as shown below.



24. On information and belief, Rollios 13W products include a housing element including fastening means for detachably coupling the housing element to the heat dissipation element, the substrate being enclosed between the heat dissipation element and said housing element, the housing element including a transparent region enabling transmission of light emitted by the one or more light-emitting elements therethrough; for example, a housing element, formed by a recessed optic, includes fastening means, formed by a twist-lock fixing system, for detachably coupling the recessed optic to the fins, as shown below.



The PCB is enclosed between the metal backing and the recessed optic when the recessed optic is fastened to the fins. The recessed optic includes a transparent lens enabling transmission of light emitted by the LEDs therethrough, as shown below.



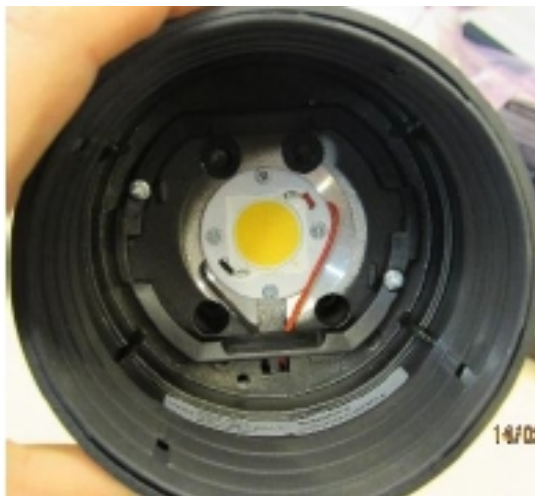
**Infringing Yori Track Large 30W Products**

25. On information and belief, Yori Track Large 30W products include a light-emitting module, as shown below.

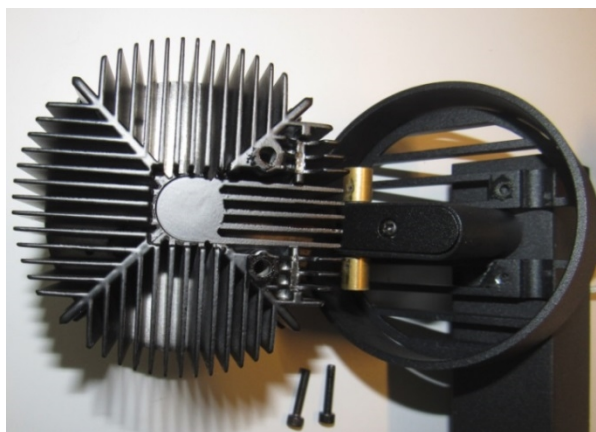
26. On information and belief, Yori Track Large 30W products include a thermally conductive substrate having one or more light-emitting elements thermally connected thereto, the substrate configured to operatively couple a source of power to the one or more light-emitting



elements, thereby providing a means for activation of the one or more light-emitting elements; for example, a thermally conductive substrate formed by a PCB thermally is connected to multiple LEDs in the LED module. The PCB is configured to operatively couple a source of power (received from the wires connected to the driver) to the LEDs to power the LEDs.



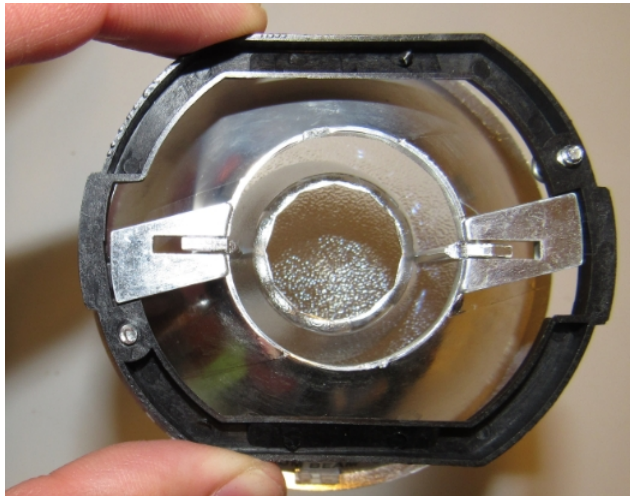
27. On information and belief, Yori Track Large 30W products include a heat dissipation element thermally coupled to the thermally conductive substrate; for example, a heat dissipation element, formed by a metal backing (shown above) and fins (shown below), is thermally coupled to the PCB.



28. On information and belief, Yori Track Large 30W products include a housing element including fastening means for detachably coupling the housing element to the heat



dissipation element, the substrate being enclosed between the heat dissipation element and said housing element, the housing element including a transparent region enabling transmission of light emitted by the one or more light-emitting elements therethrough; for example, a housing element, formed by recessed optic and twist-lock fixing ring, includes fastening means, formed by screws, for detachably coupling the recessed optic and twist-lock fixing ring to the metal backing.



The PCB is enclosed between the metal backing and the recessed optic when the recessed optic and twist-lock fixing ring are fastened to the metal backing. The recessed optic includes a transparent lens enabling transmission of light emitted by the LEDs therethrough.



29. The full extent of Defendants' infringement is not presently known to Philips Lighting. On information and belief, Defendants have made and sold, or will make and sell, products under different names or part numbers that infringe the '604 Patent in a similar manner. Philips Lighting makes this preliminary identification of infringing products and infringed claims in Count One without the benefit of discovery or claim construction in this action, and expressly reserves the right to augment, supplement, and revise its identifications based on additional information obtained through discovery or otherwise.

30. Philips Lighting has suffered and continues to suffer damages as a result of Defendants' infringement of the '604 Patent in an amount to be determined at trial.

31. Defendants' infringement of the '604 Patent is causing irreparable harm for which Philips Lighting has no adequate remedy at law unless Defendants are enjoined by this Court. Under 35 U.S.C. § 283, Philips Lighting is entitled to a permanent injunction against further infringement of the '604 Patent.

32. Defendants have been aware of the '604 Patent since no later than the date of this Complaint.

## **COUNT TWO**

### **INFRINGEMENT OF U.S. PATENT NO. 7,352,138**

33. Philips Lighting incorporates by reference the allegations in paragraphs 1-32 as if fully set forth herein.

34. On information and belief, Defendants have infringed and are infringing claims of the '138 Patent, including at least claim 1, in violation of 35 U.S.C. § 271(a) by manufacturing, using, offering to sell, selling, and/or importing infringing products.

35. Claim 1 of the '138 Patent recites:

An illumination apparatus, comprising:

at least one LED; and

at least one controller coupled to the at least one LED and configured to receive a power-related signal from an alternating current (A.C.) power source that provides signals other than a standard A.C. line voltage, the at least one controller further configured to provide power to the at least one LED based on the power-related signal.

**Infringing Luminaires with H60 drivers**

36. On information and belief, Defendants have directly infringed and are directly infringing claim 1 of the '138 Patent by making, using, offering to sell, selling, and/or importing at least the following luminaires: Splyt Track 7° 9 LED 17W, Splyt Track 7° LED 31W, Splyt Track 22° 9 LED 17W, Splyt Track 22° 16 LED 31W, Splyt Track 42° 9 LED 17W, Splyt Track 42° 16 LED 31W, Splyt Track 3° 9 LED 17W, Splyt Track 3° 16 LED 31W, Yori Track Large 25W Warm Dim, Varios Horizontal Large 26W, Varios Vertical Large 26W, Indoor cells Transparent Diffuser 18W 9°, Indoor cells Transparent Diffuser 18W 24°, Indoor cells Transparent Diffuser 18W 55°, Indoor cells Transparent Diffuser 18W Asymmetric, Indoor cells Transparent Diffuser 18W Double Asymmetric, Indoor cells Transparent Diffuser 18W Rectangular, Indoor cells Transparent Diffuser 18W 68°, Indoor cells Opal Diffuser 13W, Indoor cells Opal Diffuser 18W, Trybeca Surface Round 6 in. 24W, Trybeca Surface Square 6 in. 24W, Yori Rail Large 25W Warm Dim, Yori Rail Large 30W, Yori Surface Ø3.75 16in. 25W Warm Dim, Yori Surface Ø3.75 16in. 25W Warm Dim Remote, Yori Surface Ø3.75 16in. 25W, Bisio 5in. 30W, Bisio 5in. 26W, Mosaico Remodel 25W, Mosaico Standard 25W, Mosaico Standard 30W, Mosaico Continuous 25W, MiLED 6 in. 24W Shallow, MiLED 8 in. 32W Shallow, MiLED 6 in. 24W Standard, MiLED 8 in. 32W Standard, Mood Adjustable Round Extra Large Trim 25W, Mood Adjustable Round Large Trimless 17W, Mood Adjustable Round Cone Extra

Large Trim 25W, Mood Adjustable Round Cone Extra Large Trimless 25W, Mood Adjustable Square Extra Large Trim 25W, Mood Adjustable Square Extra Large Trimless 25W, Mood Adjustable Square Pyramid Extra Large Trim 25W, Mood Adjustable Square Pyramid Extra Large Trimless 25W, Mood Fixed Round Extra Large Trim 25W, Mood Fixed Square Extra Large Trim 25W, Mood Wall Washer Drop Round Extra Large Trim 25W, Mood Wall Washer Drop Round Extra Large Trimless 25W, Mood Wall Washer Drop Square Extra Large Trim 25W, Mood Wall Washer Drop Square Extra Large Trimless 25W, Mood Wall Washer Flush Round Extra Large Trim 25W, Mood Fixed Round Flush Extra Large Trimless 25W, Mood Fixed Round Extra Large Trimless 25W, Mood Wall Washer Flush Square Extra Large Trim 25W, Trybeca Rectangular 6 in. 24W Trim, Trybeca Rectangular 6 in. 30W Trim Warm Dim, Trybeca Rectangular 6 in. 24W Trimless, Trybeca Rectangular 6 in. 30W Trimless Warm Dim, Trybeca Round 6 in. 24W Trim, Trybeca Round 6 in. 30W Trim Warm Dim, Trybeca Round 6 in. 24W Trimless, Trybeca Round 6 in. 30W Trimless Warm Dim, Trybeca Round Super Drop 6 in. 24W Trim, Trybeca Round Super Drop 6 in. 30W Trim Warm Dim, Trybeca Round Super Drop 6 in. 24W Trimless, Trybeca Round Super Drop 6 in. 30W Trimless Warm Dim, Trybeca Square 6 in. 24W Trim, Trybeca Square 6 in. 30W Trim Warm Dim, Trybeca Square 6 in. 24W Trimless, Trybeca Square 6 in. 30W Trimless Warm Dim, Trybeca Square Super Drop 6 in. 24W Trim, Trybeca Square Super Drop 6 in. 30W Trim Warm Dim, Trybeca Square Super Drop 6 in. 24W Trimless, Trybeca Square Super Drop 6 in. 30W Trimless Warm Dim, Unimosa 30W, Unimosa 26W, Unisio 5in. 26W, Unisio 5in. 30W, Yori 1Lt Round Large Trimless 30W, Yori 1Lt Round Large Trim 30W, Yori 1Lt Square Large Trimless 30W, Yori 1Lt Square Large Trim 30W, Yori Surface Large 25W Warm Dim, Yori Surface Large 30W, Yori Pendant Ø3.75 16 in. 25W Warm Dim, Yori Pendant Ø3.75 16 in. 25W, Yori Pendant Ø3.75 16 in. 25W Warm Dim

Remote, Yori Pendant Ø3.75 16 in. 25W Remote, Yori Pendant Ø3.75 32 in. 25W Warm Dim, Yori Pendant Ø3.75 32 in. 25W, Yori Pendant Ø3.75 32 in. 25W Warm Dim Remote, Yori Pendant Ø3.75 32 in. 25W Remote, Yori Cove Rail Large 25W Warm Dim, Yori Cove Rail Large 30W, and Envios IP66 Medium 30W, and all LED-based lighting products incorporating the “H60” driver module in this District and elsewhere in the United States. On information and belief each of these products is (a) sold with an XTC32-0700P-UNV-I LED driver module from Hatch Transformers Inc. (“Hatch”), which is designated on Defendants’ website as the H60 driver, and/or (b) sold with a housing including an H60 driver. An H60 driver was reverse engineered and the resulting schematics are attached as Exhibit 1.

37. The H60 driver is a dimmable LED driver and is suitable for operation with a mains supply phase-cut dimmer. The output voltage and current of a H60 LED driver was measured when powered by an A.C. mains source dimmed with a Busch-Jaeger 2247U phase-cut dimmer between a minimum phase cut and a maximum phase cut, the results of which are attached as Exhibit 2.

38. On information and belief, Defendants’ luminaires with H60 drivers include an illumination apparatus. The individual components cited below refer to Exhibit 1 unless stated otherwise.

39. On information and belief, Defendants market luminaires with H60 drivers as LED luminaires.

40. On information and belief, Defendants’ luminaires with H60 drivers include at least one controller coupled to the at least one LED and configured to receive a power-related signal from an alternating current (A.C.) power source that provides signals other than a standard A.C. line voltage, the at least one controller further configured to provide power to the at least

one LED based on the power-related signal; for example, the H60 driver including T1, D8, U2, and Q4 provides power to the LED module based on a phase-cut power-related signal received from a phase-cut alternating current power source at terminals L, N. *See also*, Exhibit 2, measured output voltage and current using varying phase-cut dimming inputs.

**Infringing Luminaires with H03 drivers**

41. On information and belief, Defendants have directly infringed and are directly infringing claim 1 of the '138 Patent by making, using, offering to sell, selling, and/or importing at least the following luminaires: Rollios 13W, Yori Track Small 13W Warm Dimming, Yori Track Large 13W, Envios Large 13W, Sunios 13W, Varios Horizontal Small 13W, Varios Vertical Small 13W, Varios Horizontal Large 13W, Varios Vertical Large 13W, CyLED 12W Fixed Surface Luminaire, Yori Rail Small 13W Warm Dim, Yori Rail Large 13W, Mosaico Standard 13W, Mosaico Continuous 13W, MiLED 6 in. 12W Shallow, MiLED 6in. 12W Standard, Trybeca Rectangular 6 in. 12W Trim, Trybeca Rectangular 3 in. 13W Trim Warm Dim, Trybeca Rectangular 6 in. 12W Trimless, Trybeca Rectangular 3 in. 13W Trimless Warm Dim, Trybeca Round 1.5 in. 4W Trim, Trybeca Round 6 in. 12W Trim, Trybeca Round 3 in. 13W Trim Warm Dim, Trybeca Round 1.5 in. 4W Trimless, Trybeca Round 6 in. 12W Trimless, Trybeca Round 3 in. 13W Trimless Warm Dim, Trybeca Round Super Drop 1.5 in. 4W Trim, Trybeca Round Super Drop 6 in. 12W Trim, Trybeca Round Super Drop 3 in. 13W Trim Warm Dim, Trybeca Round Super Drop 1.5 in. 4W Trimless, Trybeca Round Super Drop 6 in. 12W Trimless, Trybeca Round Super Drop 3 in. 13W Trimless Warm Dim, Trybeca Square 1.5 in. 4W Trim, Trybeca Square 6 in. 12W Trim, Trybeca Square 3 in. 13W Trim Warm Dim, Trybeca Square 1.5 in. 4W Trimless, Trybeca Square 6 in. 12W Trimless, Trybeca Square 3 in. 13W Trimless Warm Dim, Trybeca Square Super Drop 1.5 in. 4W Trim, Trybeca Square Super Drop

6 in. 12W Trim, Trybeca Square Super Drop 3 in. 13W Trim Warm Dim, Trybeca Square Super Drop 1.5 in. 4W Trimless, Trybeca Square Super Drop 6 in. 12W Trimless, Trybeca Square Super Drop 3 in. 13W Trimless Warm Dim, Yori 2Lt Rectangle Small Trimless 13W Warm Dim, Yori 2Lt Rectangle Large Trimless 13W, Yori 2Lt Rectangle Small Trim 13W Warm Dim, Yori 2Lt Rectangle Large Trim 13W, Yori 1Lt Round Small Trimless 13W Warm Dim, Yori 1Lt Round Small Trim 13W Warm Dim, Yori 1Lt Round Large Trim 13W, Yori 1Lt Square Small Trimless 13W Warm Dim, Yori 1Lt Square Large Trimless 13W, Yori 1Lt Square Small Trim 13W Warm Dim, Yori 1Lt Square Large Trim 13W, Yori Surface Small 13W Warm Dim, Yori Surface Large 13W, Ladder 4x 13W, Yori Cove Rail 13W Small Warm Dim, and Yori Cove Rail Large 13W, and all products having the “H03” driver in this District and elsewhere in the United States. On information and belief each of these products is sold with a Hatch LC14-0350P-120-C driver (designated on Defendants’ website as the H03 driver) and/or with a housing including an H03 driver. An H03 driver was reverse engineered and the resulting schematics are attached as Exhibit 3.

42. The H03 driver is a dimmable LED driver and is suitable for operation with a mains supply phase-cut dimmer. The output voltage and current of an H03 LED driver was measured when powered by an A.C. mains source dimmed with a Berker 2875 phase-cut dimmer between a minimum phase cut and a maximum phase cut, the results of which are attached as Exhibit 4.

43. On information and belief, Defendants luminaires with H03 drivers include an illumination apparatus. The individual components cited below refer to Exhibit 3 unless stated otherwise.



44. On information and belief, Defendants market luminaires with H03 drivers as LED luminaires.

45. On information and belief, Defendants' luminaires with H03 drivers include at least one controller coupled to the at least one LED and configured to receive a power-related signal from an alternating current (A.C.) power source that provides signals other than a standard A.C. line voltage, the at least one controller further configured to provide power to the at least one LED based on the power-related signal; for example, the H03 driver including T1, D11, U1, and Q1 provides power to the LED module based on a phase-cut power-related signal received from a phase-cut alternating current power source at terminals L, N. *See also*, Exhibit 4, measured output voltage and current using varying phase-cut dimming inputs.

**Infringing Luminaires with H01 drivers**

46. On information and belief, Defendants have directly infringed and are directly infringing claim 1 of the '138 Patent, by making, using, offering to sell, selling, and/or importing at least the following luminaires: Yori Track Small 10W, Envios Medium 10W, Yori Canopy 10W Small, Yori Canopy 13W Small Warm Dim, Yori Rail Small 10W, Yori Surface Ø2.5 10 in. 10W, Yori Surface Ø2.5 10 in. 10W Remote, Bisio 4in. 10W, LowLED Adjustable Round 10W, LowLED Shower Light 10W, LowLED Fixed Solid Brass 10W, LowLED Fixed 10W, LowLED Adjustable Square 10W, LowLED Fixed Comfort 10W, LowLED Fixed Pin Hole Spot 10W, LowLED Adjustable Slot Aperture 10W, Unisio 4 in. 10W, Yori 2Lt Rectangle Small Trimless 10W, Yori 2Lt Rectangle Small Trim 10W, Yori 1Lt Round Small Trimless 10W, Yori 1Lt Round Small Trim 10W, Yori 1Lt Square Small Trimless 10W, Yori 1Lt Square Small Trim 10W, Yori Surface Small 10W, Yori Pendant Ø2.5 10 in. 10W, Yori Pendant Ø2.5 10 in. 10W Remote, Yori Pendant Ø2.5 24 in. 10W, Yori Pendant Ø2.5 24 in. 10W Remote, Yori Cove Rail

10W Small, and all products having the “H01” driver in this District and elsewhere in the United States. On information and belief each of these products is sold with a Hatch LC12-0260P-120-B (designated on Defendants’ website as the H01 driver) and/or with a housing including an H01 driver. An H01 driver was reverse engineered and the resulting schematics are attached as Exhibit 5.

47. The H01 driver is a dimmable LED driver and is suitable for operation with a mains supply phase-cut dimmer. The output voltage and current of an H01 LED driver was measured when powered by an A.C. mains source dimmed with a Berker 2875 phase-cut dimmer between a minimum phase cut and a maximum phase cut, the results of which are attached as Exhibit 6.

48. On information and belief, Defendants’ luminaires with H01 drivers include an illumination apparatus. The individual components cited below refer to Exhibit 5 unless stated otherwise.

49. On information and belief, Defendants market luminaires with H01 drivers as LED luminaires.

50. On information and belief, Defendants’ luminaires with H01 drivers include at least one controller coupled to the at least one LED and configured to receive a power-related signal from an alternating current (A.C.) power source that provides signals other than a standard A.C. line voltage, the at least one controller further configured to provide power to the at least one LED based on the power-related signal; for example, the H01 driver including T1, D11, U1, and Q2 provides power to the LED module based on a phase-cut power-related signal received from a phase-cut alternating current power source at terminals L, N. *See also*, Exhibit 6, measured output voltage and current using varying phase-cut dimming inputs.

**Infringing Luminaires with L32 drivers**

51. On information and belief, Defendants have directly infringed and are directly infringing claim 1 of the '138 Patent by making, using, offering to sell, selling, and/or importing at least the following luminaires: Mood Adjustable Round Extra Large Trim 34W Warm Dim, Mood Adjustable Round Extra Large Trimless 34W Warm Dim, Mood Adjustable Round Cone Extra Large Trim 34W Warm Dim, Mood Adjustable Round Cone Extra Large Trimless 34W Warm Dim, Mood Adjustable Square Extra Large Trim 34W Warm Dim, Mood Adjustable Square Extra Large Trimless 34W Warm Dim, Mood Adjustable Square Pyramid Extra Large Trim 34W Warm Dim, Mood Adjustable Square Pyramid Extra Large Trimless 34W Warm Dim, Mood Fixed Round Extra Large Trim 34W Warm Dim, Mood Fixed Square Extra Large Trim 34W Warm Dim, Mood Wall Washer Drop Round Extra Large Trim 34W Warm Dim, Mood Wall Washer Drop Round Extra Large Trimless 34W Warm Dim, Mood Wall Washer Drop Square Extra Large Trim 34W Warm Dim, Mood Wall Washer Drop Square Extra Large Trimless 34W Warm Dim, Mood Wall Washer Flush Round Extra Large Trim 34W Warm Dim, Mood Fixed Round Extra Large Trimless 34W Warm Dim, Mood Wall Washer Flush Square Extra Large Trim 34W Warm Dim, and all products with the "L32" driver in this District and elsewhere in the United States. On information and belief each of these products is (a) sold with an LTEA4U1UKN-FA090 driver module from Lutron Electronics Company, which is designated on Defendants' website as the L32 driver, and/or (b) with a housing including an L32 driver.

52. The L32 driver is a dimmable LED driver and is suitable for operation with a mains supply phase-cut dimmer. The output voltage and current of an L32 driver was measured

when powered by an A.C. mains source dimmed with a Gira 117600 phase-cut dimmer between a minimum phase cut and a maximum phase cut, the results of which are attached as Exhibit 7.

53. On information and belief, Defendants' luminaires with L32 drivers include an illumination apparatus.

54. On information and belief, Defendants market luminaires with L32 drivers as LED luminaires.

55. On information and belief, Defendants' luminaires with L32 drivers include at least one controller coupled to the at least one LED and configured to receive a power-related signal from an alternating current (A.C.) power source that provides signals other than a standard A.C. line voltage, the at least one controller further configured to provide power to the at least one LED based on the power-related signal; for example, the L32 driver provides power to the LED module based on a phase-cut power-related signal received from a phase-cut alternating current power source. *See*, Exhibit 7, measured output voltage and current using varying phase-cut dimming inputs.

56. The full extent of Defendants' infringement is not presently known to Philips Lighting. On information and belief, Defendants have made and sold, or will make and sell, products under different names or part numbers that infringe the '138 Patent in a similar manner. Philips Lighting makes this preliminary identification of infringing products and infringed claims in Count Two without the benefit of discovery or claim construction in this action, and expressly reserves the right to augment, supplement, and revise its identifications based on additional information obtained through discovery or otherwise.

57. Philips Lighting has suffered and continues to suffer damages as a result of Defendants' infringement of the '138 Patent in an amount to be determined at trial.

58. Defendants' infringement of the '138 Patent is causing irreparable harm for which Philips Lighting has no adequate remedy at law unless Defendants are enjoined by this Court. Under 35 U.S.C. § 283, Philips Lighting is entitled to a permanent injunction against further infringement of the '138 Patent.

59. Defendants have been aware of the '138 Patent since no later than the date of this Complaint.

### **COUNT THREE**

#### **INFRINGEMENT OF U.S. PATENT NO. 7,766,518**

60. Philips Lighting incorporates by reference the allegations in paragraphs 1-59 as if fully set forth herein.

61. On information and belief, Defendants have infringed and are infringing claims of the '518 Patent, including at least claim 1, in violation of 35 U.S.C. § 271(a) by manufacturing, using, offering to sell, selling, and/or importing infringing products.

62. Claim 1 of the '518 Patent recites:

A light-generating apparatus, comprising:

an LED assembly, comprising:

an assembly substrate; and

a plurality of LED subassemblies coupled to the assembly substrate, each LED subassembly of the plurality of LED subassemblies forming at least one of a mechanical connection, an electrical connection, and a first thermal connection to the assembly substrate;

a plurality of secondary optical components; and a chassis coupled to the LED assembly and including a plurality of chambers in which the plurality of secondary optical components respectively are held, the chassis configured such that each secondary optical component of the plurality of secondary optical components is disposed in an optical path of a corresponding one of the plurality of LED subassemblies;

wherein the LED assembly is disposed between the thermally conductive base plate and the chassis.

63. On information and belief, Defendants have directly infringed and are directly infringing claim 1 of the '518 Patent by making, using, offering to sell, selling, and/or importing at least Indoor Cells Transparent Diffuser 18W 68° (“Indoor Cells Transparent Diffuser 68°”) products in this District and elsewhere in the United States.

**Infringing Indoor Cells Transparent Diffuser 68° Products**

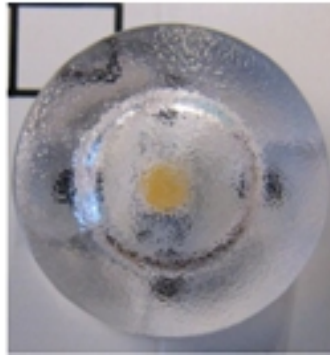
64. On information and belief, Indoor Cells Transparent Diffuser 68° products include a light-generating apparatus, as shown, for example, below.



65. On information and belief, as shown above, Indoor Cells Transparent Diffuser 68° products include an LED assembly, comprising an assembly substrate and a plurality of LED subassemblies coupled to the assembly substrate, each LED subassembly of the plurality of LED subassemblies forming at least one of a mechanical connection, an electrical connection, and a first thermal connection to the assembly substrate; for example, an assembly substrate is formed by a metal-core PCB; and a plurality of LED subassemblies are formed by LED dies coupled to

the metal-core PCB, each LED die of the plurality of LED dies forms a mechanical connection, an electrical connection, and a thermal connection to the metal-core PCB.

66. On information and belief, Indoor Cells Transparent Diffuser 68° products include a plurality of secondary optical components; for example, a plurality of secondary optical components, each being formed by a cylindrical lens, are respectively disposed over each LED die, as shown below.

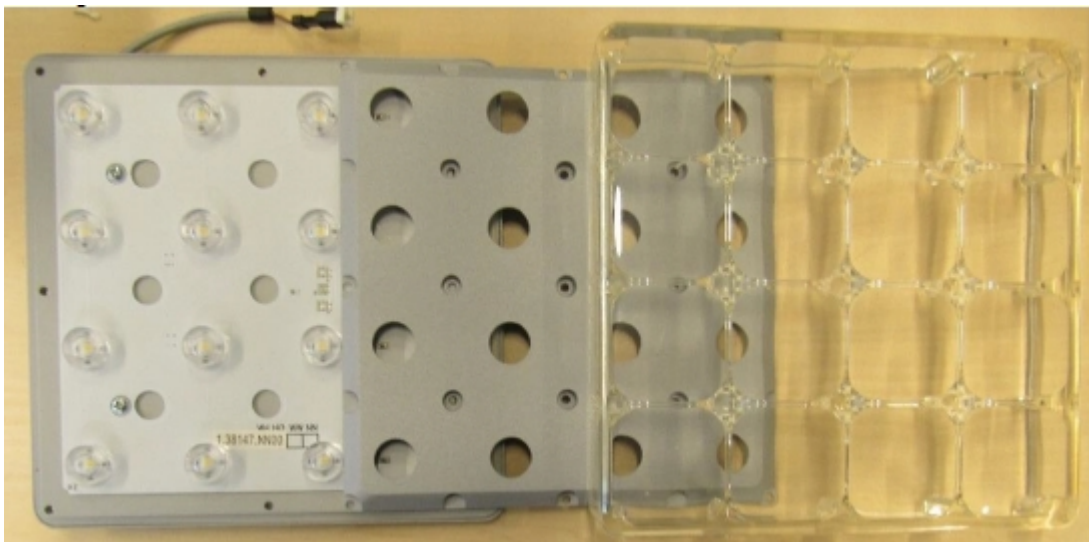


67. On information and belief, Indoor Cells Transparent Diffuser 68° products include a chassis coupled to the LED assembly and including a plurality of chambers in which the plurality of secondary optical components respectively are held, the chassis configured such that each secondary optical component of the plurality of secondary optical components is disposed in an optical path of a corresponding one of the plurality of LED subassemblies; for example a chassis, formed by a plastic cover, is coupled to the metal-core PCB and includes a plurality of chambers in which the plurality of cylindrical lenses respectively are held, the plastic cover is configured such that each cylindrical lens of the plurality of lenses is disposed in an optical path of a corresponding one of the plurality of LED dies, as shown below.

68. On information and belief, the LED assembly is disposed between the thermally conductive base plate and the chassis; for example, the metal-core PCB is disposed between the



thermally conductive base plate, formed by a metal plate to which the metal-core PCB is attached, and the plastic cover, as shown below.



69. The full extent of Defendants' infringement is not presently known to Philips Lighting. On information and belief, Defendants have made and sold, or will make and sell, products under different names or part numbers that infringe the '518 Patent in a similar manner. Philips Lighting makes this preliminary identification of infringing products and infringed claims in Count Four without the benefit of discovery or claim construction in this action, and expressly reserves the right to augment, supplement, and revise its identifications based on additional information obtained through discovery or otherwise.

70. Philips Lighting has suffered and continues to suffer damages as a result of Defendants' infringement of the '518 Patent in an amount to be determined at trial.

71. Defendants' infringement of the '518 Patent is causing irreparable harm for which Philips Lighting has no adequate remedy at law unless Defendants are enjoined by this Court. Under 35 U.S.C. § 283, Philips Lighting is entitled to a permanent injunction against further infringement of the '518 Patent.

72. Defendants have been aware of the '518 Patent since no later than the date of this Complaint.

**COUNT FOUR**

**INFRINGEMENT OF U.S. PATENT NO. 8,070,328**

73. Philips Lighting incorporates by reference the allegations in paragraphs 1-72 as if fully set forth herein.

74. On information and belief, Defendants have infringed and are infringing claims of the '328 Patent, including at least claim 1, in violation of 35 U.S.C. § 271(a) by manufacturing, using, offering to sell, selling, and/or importing infringing products.

75. Claim 1 of the '328 Patent recites:

An LED downlight fixture, comprising:

an array of LEDs in thermal connectivity with a heatsink, said array of LEDs positioned adjacent a first aperture of a multi-piece reflector assembly;

said multi-piece reflector assembly including:

a first reflector having said first aperture disposed in an upper portion of said first reflector and an opposed larger second aperture in a lower portion of said first reflector;

a second reflector having a first aperture positioned adjacent said second aperture of said first reflector and a second aperture opposite said first aperture of said second reflector and defining a light exit passageway;

a diffuser positioned proximal to and extending across said second aperture of said first reflector and said first aperture of said second reflector.

76. On information and belief, Defendants have directly infringed and are directly infringing claim 1 of the '328 Patent by making, using, offering to sell, selling, and/or importing at least Rollios 13W, Yori Track Small 10W, and Yori Track Small 13W Warm Dimming products in this judicial district and elsewhere in the United States.

**Infringing Rollios 13W Products**

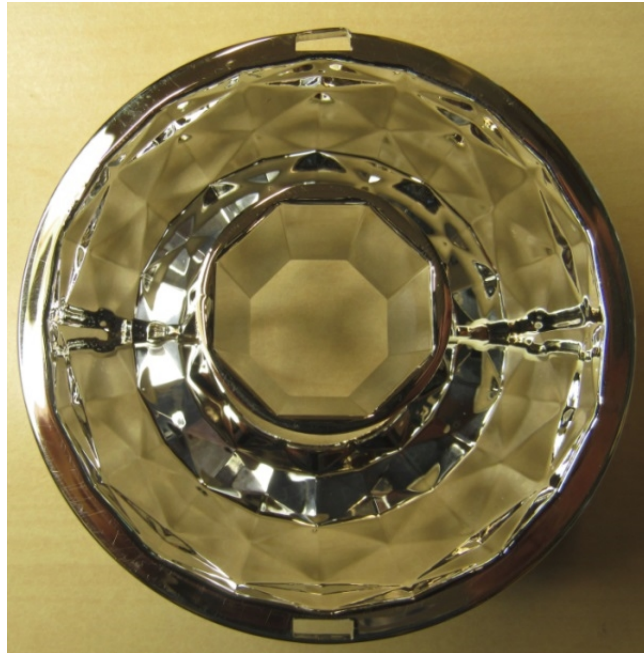
77. On information and belief, Rollios 13W products include an LED downlight fixture, as shown below.

78. On information and belief, Rollios 13W products include an array of LEDs in thermal connectivity with a heatsink, said array of LEDs positioned adjacent a first aperture of a multi-piece reflector assembly; for example, an array of LEDs in the LED module is in thermal connectivity with a heatsink formed by a metal backing and fins, as shown below.



79. On information and belief, Rollios 13W products include a first reflector having said first aperture disposed in an upper portion of said first reflector and an opposed larger second aperture in a lower portion of said first reflector; for example, the array of LEDs are positioned adjacent a first aperture of a multi-piece reflector assembly including a first reflector, formed by the recessed optic, that has a first aperture disposed in an upper portion of the recessed optic, formed by the light aperture positioned nearest to the LED module, and an opposed larger

second aperture in a lower portion of the recessed optic, formed by the light aperture positioned farthest from the LED module, as shown below.



80. On information and belief, Rollios 13W products include a second reflector having a first aperture positioned adjacent said second aperture of said first reflector and a second aperture opposite said first aperture of said second reflector and defining a light exit passageway; for example, a second reflector, formed by the outer reflector (integrally connected to the heat sink fins), has a first aperture positioned adjacent the second aperture of said first reflector, formed by the interior rim of the outer reflector (where the fins of the heat sink connect to the outer reflector), and a second aperture opposite the interior rim of the outer reflector and defining a light exit passageway, formed by the open end of the outer reflector, as shown below.

81. On information and belief, Rollios 13W products include a diffuser positioned proximal to and extending across said second aperture of said first reflector and said first aperture of said second reflector; for example, a diffusing lens is positioned proximal to and

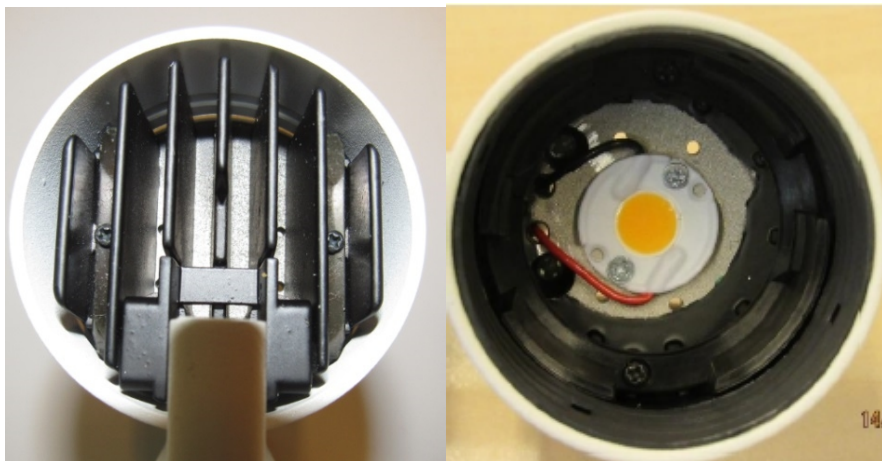
extends across the light aperture farthest from the LED module of the recessed optic and across the interior rim of the outer reflector, as shown below.



**Infringing Yori Track Small 10W Products**

82. On information and belief, Yori Track Small 10W products include an LED downlight fixture, as shown below.

83. On information and belief, Yori Track Small 10W products include an array of LEDs in thermal connectivity with a heatsink, said array of LEDs positioned adjacent a first aperture of a multi-piece reflector assembly; for example, an array of LEDs in the LED module is in thermal connectivity with a heatsink formed by a metal backing and fins, as shown below.

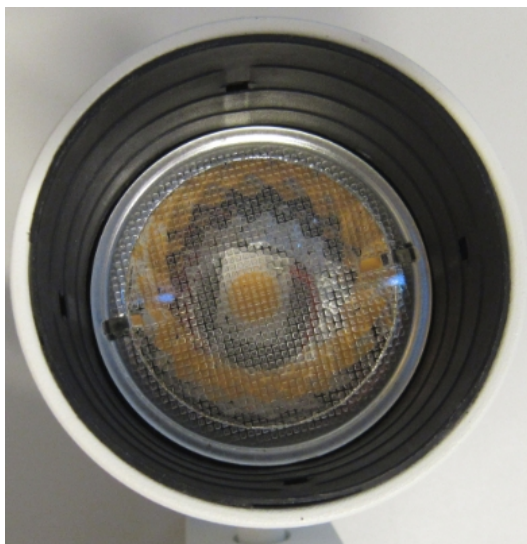


84. On information and belief, Yori Track Small 10W products include a first reflector having said first aperture disposed in an upper portion of said first reflector and an opposed larger second aperture in a lower portion of said first reflector; for example, the array of LEDs are positioned adjacent a first aperture of a multi-piece reflector assembly including a first reflector, formed by the recessed optic, has a first aperture disposed in an upper portion of the recessed optic, formed by the light aperture positioned nearest to the LED module, and an opposed larger second aperture in a lower portion of the recessed optic, formed by the light aperture positioned farthest from the LED module, as shown below.

85. On information and belief, Yori Track Small 10W products include a second reflector having a first aperture positioned adjacent said second aperture of said first reflector and a second aperture opposite said first aperture of said second reflector and defining a light exit passageway; for example, a second reflector, formed by the cylindrical housing, has a first aperture positioned adjacent the second aperture of said first reflector, formed by the interior portion of the cylindrical housing disposed directly in front of the second aperture of the recessed optic, and a second aperture opposite the first aperture of the cylindrical housing and defining a light exit passageway, formed by the open end of the cylindrical housing, as shown below.

86. On information and belief, Yori Track Small 10W products include a diffuser positioned proximal to and extending across said second aperture of said first reflector and said first aperture of said second reflector; for example, a diffusing lens is positioned proximal to and extends across the light aperture farthest from the LED module of the recessed optic and across the portion of the cylindrical housing disposed directly in front of the second aperture of the recessed optic.

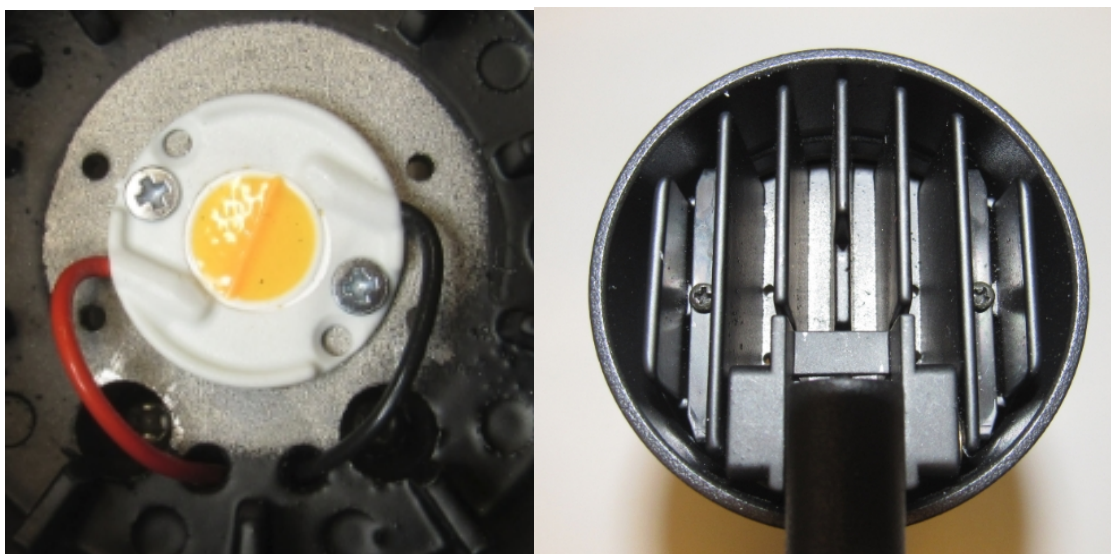




**Infringing Yori Track Small 13W Warm Dimming Products**

87. On information and belief, Yori Track Small 13W Warm Dimming products include an LED downlight fixture, as shown below.

88. On information and belief, Yori Track Small 13W Warm Dimming products include an array of LEDs in thermal connectivity with a heatsink, said array of LEDs positioned adjacent a first aperture of a multi-piece reflector assembly; for example, an array of LEDs in the LED module in thermal connectivity with a heatsink formed by a metal backing and fins.





89. On information and belief, Yori Track Small 13W Warm Dimming products include a first reflector having said first aperture disposed in an upper portion of said first reflector and an opposed larger second aperture in a lower portion of said first reflector; for example, the array of LEDs are positioned adjacent a first aperture of a multi-piece reflector assembly including a first reflector, formed by the recessed optic, having a first aperture disposed in an upper portion of the recessed optic, formed by the light aperture positioned nearest to the LED module, and an opposed larger second aperture in a lower portion of the recessed optic, formed by the light aperture positioned farthest from the LED module.



90. On information and belief Yori Track Small 13W Warm Dimming products include a second reflector having a first aperture positioned adjacent said second aperture of said first reflector and a second aperture opposite said first aperture of said second reflector and defining a light exit passageway; for example, a second reflector, formed by the cylindrical housing, has a first aperture positioned adjacent the second aperture of said first reflector, formed by the interior portion of the cylindrical housing disposed directly in front of the second aperture of the recessed optic, and a second aperture opposite the first aperture of the cylindrical housing

and defining a light exit passageway, formed by the open end of the cylindrical housing, as shown below.

91. On information and belief, Yori Track Small 13W Warm Dimming products include a diffuser positioned proximal to and extending across said second aperture of said first reflector and said first aperture of said second reflector; for example, a diffusing lens is positioned proximal to and extends across the light aperture farthest from the LED module of the recessed optic and across the portion of the cylindrical housing disposed directly in front of the second aperture of the recessed optic, as shown below.



92. The full extent of Defendants' infringement is not presently known to Philips Lighting. On information and belief, Defendants have made and sold, or will make and sell, products under different names or part numbers that infringe the '328 Patent in a similar manner. Philips Lighting makes this preliminary identification of infringing products and infringed claims in Count Four without the benefit of discovery or claim construction in this action, and expressly reserves the right to augment, supplement, and revise its identifications based on additional information obtained through discovery or otherwise.

93. Philips Lighting has suffered and continues to suffer damages as a result of Defendants' infringement of the '328 Patent in an amount to be determined at trial.

94. Defendants' infringement of the '328 Patent is causing irreparable harm for which Philips Lighting has no adequate remedy at law unless Defendants are enjoined by this Court. Under 35 U.S.C. § 283, Philips Lighting is entitled to a permanent injunction against further infringement of the '328 Patent.

95. Defendants have been aware of the '328 Patent since no later than the date of this Complaint.

#### **PRAYER FOR RELIEF**

WHEREFORE, Philips Lighting prays for the following judgments and relief:

- (a) A judgment that Defendants have infringed and are infringing the Patents-in-Suit;
- (b) A permanent injunction against Defendants and their affiliates, subsidiaries, assigns, employees, agents or anyone acting in privity or concert from infringing the Patents-in-Suit, including enjoining the making, offering to sell, selling, using, or importing into the United States products claimed in any of the claims of the Patents-in-Suit; using or performing methods claimed in any of the claims of the Patents-in-Suit; inducing others to use and perform methods that infringe any claim of the Patents-in-Suit; or contributing to others using and performing methods that infringe any claim of the Patents-in-Suit, until the expiration of the Patents-in-Suit;
- (c) An award of damages adequate to compensate Philips Lighting for Defendants' patent infringement, and an accounting to adequately compensate Philips Lighting for the infringement, including, but not limited to, lost profits and/or a reasonable royalty;
- (d) An award of pre-judgment and post-judgment interest at the maximum rate allowed by law;

(e) An order finding that this is an exceptional case and awarding Philips Lighting its costs, expenses, disbursements, and reasonable attorneys' fees related to Defendants' patent infringement under 35 U.S.C. § 285 and all other applicable statutes, rules and common law; and

(f) Such other further relief, in law or equity, as this Court deems just and proper.

**JURY TRIAL**

In accordance with Rule 38 of the Federal Rules of Civil Procedure, Philips Lighting hereby demands a jury trial on all issues triable before a jury.

Dated: November 28, 2018

Respectfully submitted,

BOND, SCHOENECK & KING, PLLC

/s/ Jeremy P. Occek

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